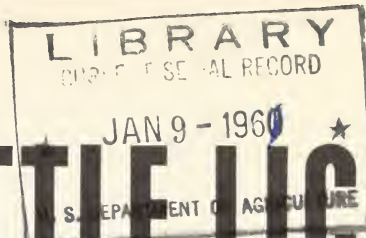


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CATTLE LICE: HOW TO CONTROL THEM



U.S. Department of Agriculture
Leaflet No. 456

CATTLE LICE: HOW TO CONTROL THEM

Four species of bloodsucking lice¹ and a biting louse² attack cattle. The bloodsucking lice feed by piercing the animal's skin and drawing blood. Biting lice feed on particles of hair, scabs, and excretions from the skin.

- Heavily infested animals may be weakened by blood losses to the point where they become more susceptible to disease.
- Lice keep beef cattle from making maximum weight gains. Heavy infestations reduce milk production of dairy cattle by 10 percent or more.

These lice occur in most of the areas of the United States where

cattle are raised, and are present the year round.

Infestations of lice are usually light in the summer and early fall but increase rapidly during the winter and spring. It is therefore especially important to inspect cattle for lice and treat them in the fall to delay and minimize the build-up of infestations during the colder months. Inspect your cattle periodically throughout the winter and spring and re-treat them as necessary to keep the lice under control.

Louse infestations usually decline greatly during the late spring and summer months, but some animals may continue to harbor damaging numbers of lice. Such animals should be treated as necessary to control the lice.

¹ *Linognathus vituli*, *Haematopinus eurytenuis*, *Solenopotes capillatus*, and *Haematopinus quadripertusus*.

² *Bovicola bovis*.

CHOICE OF INSECTICIDE

Insecticides that are effective in controlling cattle lice are rotenone, pyrethrum, methoxychlor, DDT, lindane, toxaphene, malathion, ronnel (available commercially as Korlan), and Bayer 21/199 (available commercially as CO-RAL).³

Your choice depends on whether you are going to treat beef cattle or dairy cattle, and on whether you wish to apply the insecticide as a spray, dip, or dust, or with rubbing devices.

³ Trade names are used in this publication solely for the purpose of providing specific information. Mention of a trade name does not constitute a guaranty or warranty of the product named and does not signify that this product is approved to the exclusion of other comparable products.

Recommendations for beef cattle differ from those for dairy cattle because some insecticides may be secreted in milk.

For beef cattle

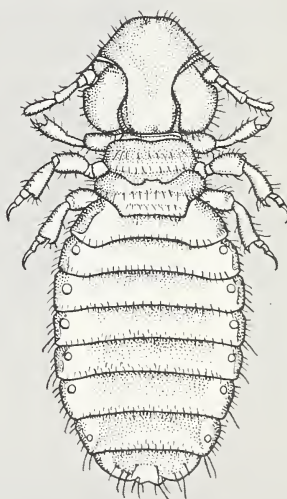
- Spray with any of the recommended insecticides except DDT.
- Dip with rotenone or toxaphene.
- Dust with rotenone, toxaphene, malathion, or methoxychlor.
- With rubbing devices use toxaphene, methoxychlor, DDT, or malathion.

For dairy cattle

- Spray with rotenone or pyrethrum.
- Dust with rotenone.



Bloodsucking louse.



Biting louse.

BN-7149

SPRAYS

Preparation

Most sprays are prepared by mixing an emulsifiable liquid or a wettable powder with water. All the recommended insecticides except rotenone, ronnel, and Bayer 21/199, may be purchased in both these forms. Rotenone is available as derris or cube powder, which can be used as a dust or mixed with water for spraying. Ronnel and Bayer 21/199 are available only as 25-percent wettable powders.

The accompanying table lists the formulations from which sprays may be prepared, the recommended

Pyrethrum and methoxychlor, recommended for controlling lice, also can be used in the summer for controlling flies. However, regular back treatments as applied for fly control may not destroy all lice.

When making the last fly-control treatments in the fall, spray the animals all over rather than on the back only. This will retard the fall buildup of lice and reduce the number of treatments during the winter.

strength of the finished spray, and the amount of each product to mix with water to make a spray of that strength. (Products on the market



Spraying cattle for lice.

N-30263

Guide for Mixing Sprays

INSECTICIDE FORMULATION, ¹ AND STRENGTH	PERCENTAGE OF INSECTICIDE DESIRED IN SPRAY	AMOUNT OF FORMULATION TO MIX WITH WATER	
		100 GALLONS	5 GALLONS
ROTENONE:			
Derris or cube powder containing 5 percent of rotenone.	0.006	1 pound	5 tablespoons
PYRETHRUM:			
EC, 1 percent ² -----	0.025	2½ gallons	16 ounces
METHOXYCHLOR:			
EC, 25 percent-----	0.5	2 gallons	13 ounces
WP, 50 percent-----	0.5	8 pounds	6½ ounces
LINDANE:			
EC, 20 percent-----	0.03	20 ounces	2 tablespoons
	0.05	1 quart	3 tablespoons
WP, 25 percent-----	0.03	1 pound	3 tablespoons
	0.05	1¾ pounds	5 tablespoons
TOXAPHENE:			
EC, 60 percent-----	0.5	5½ pints	4½ ounces
WP, 40 percent-----	0.5	10 pounds	8 ounces
MALATHION:			
EC, 57 percent-----	0.5	1 gallon	6 ounces
WP, 25 percent-----	0.5	16 pounds	13 ounces
BAYER 21/199 (CO-RAL):			
WP, 25 percent-----	0.5	16 pounds	13 ounces
RONNEL (Korlan):			
EC, 24 percent-----	0.5	2 gallons	13 ounces
WP, 25 percent-----	0.5	16 pounds	13 ounces

¹ EC=emulsifiable concentrate; WP=wettable powder.

² Refers to pyrethrins content. Pyrethrum formulations usually contain a synergist to improve effectiveness.

contain various percentages of insecticide. If you buy a product in which the percentage of insecticide differs from that stated in the first column of the table, mix proportionately more or less of it with water.)

Lindane sprays applied to animals over 1 year old may contain 0.03 to 0.05 percent of insecticide; those applied to younger animals must not exceed 0.03 percent.

Apply all other sprays only at the recommended concentration of insecticide. Stronger sprays may injure animals.

Application

Apply enough spray to thoroughly wet the animals to the skin. The size of the animal and the length of its hair will determine the amount of spray needed. Complete coverage may require 2 to 4 gallons for mature animals in winter coat. Two to 4 quarts usually is sufficient to treat short-haired cattle.

For treating a few animals, use a cylindrical air-pressure or knapsack sprayer that holds 2 to 3 gallons. Shake such sprayers occasionally to assure a properly mixed spray.

For large herds, power sprayers are more economical and do the job faster than hand equipment. Operate the sprayer at a pressure of 100 to 200 pounds per square inch.

Make two applications of rotenone or pyrethrum 14 to 18 days apart. One thorough treatment with other insecticides usually provides satisfactory control. However, a second treatment after 2 to 3 weeks may sometimes be necessary to eradicate infestations.

DIPS

Rotenone and toxaphene may be used as dips at the same strength as sprays—0.006 percent and 0.5 percent, respectively—and are prepared from the same ingredients.

Rotenone

To make a rotenone dip, add 1 pound of derris or cube powder containing 5 percent of rotenone to each 100 gallons of water. Agitate the mixture thoroughly before dipping the cattle.

Two dippings 14 to 18 days apart are necessary.

Toxaphene

To make a toxaphene dip, add the following to 1,000 gallons of water: 100 pounds of 40-percent wettable powder or 7 gallons of 60-percent emulsifiable liquid.

Use only formulations approved for use on livestock. Formulations of toxaphene that do not remain evenly dispersed in dipping vats may kill or injure animals.

Control of the Tail Louse

The tail louse, *Haematopinus quadripertusus*, which is prevalent in the Southern States, is much more difficult to control than other species of cattle lice. To control it, apply a spray in which the percentage of insecticide is two or three times the percentage indicated in the Guide for Mixing Sprays, page 5. Use these higher concentrations only on the infested tail.

Usually, one dipping gives good control. If necessary, repeat the dipping in 2 weeks.

DUSTS

Dusts are less effective than sprays or dips because they do not readily penetrate long, dense hair; but they are useful in cold weather when wetting animals may be injurious.

Any of the following dusts may be used on *beef cattle*: Rotenone, 1 percent; malathion, 4 to 5 percent; toxaphene and methoxychlor, 10 percent. These products are generally available in the strengths indicated. If not, they can be prepared by diluting wettable powder concentrates with inert carriers such as talc, kaolin, or pyrophyllite.

Only 1-percent rotenone dust may be used on *dairy cattle*.

Apply about 6 ounces of dust to each mature animal, with any available duster. Rub the animals by hand, if necessary, to disperse the powder through thick hair.

Several treatments 14 to 18 days apart usually are needed to eradicate lice.



A low cost rubbing device will reduce infestations of lice on beef cattle.

SELF-TREATMENT DEVICES

Several types of self-treatment devices are available commercially. Complete instructions on their use are given on labels or in accompanying booklets.

Satisfactory homemade devices can be constructed at little cost. They may consist of a post or a cable wrapped with burlap bags. The bags are treated with insecticide, and cattle treat themselves when they rub against them.

This method of reducing infestations of cattle lice is suitable only for beef cattle. It is not as effective as sprays or dips but has advantages of low cost and ease of treatment.

To make a cable-type rubbing device, hang a chain or several strands of heavy wire at a height

of 4 feet between 2 posts that are 15 to 20 feet apart. Let it sag to about 18 inches above the ground midway between the posts. Or, run the cable from the top of a 4-foot post to an anchor post at ground level 15 to 20 feet away.

Place rubbing devices near a salt or water trough, or in an area where cattle loaf or rest. Install them early in the fall before lice become numerous. If you wait until heavy infestations have developed, they may not provide satisfactory control.

Treat the burlap wrapping with an oil or kerosene solution containing 5 percent of toxaphene, DDT, or methoxychlor, or 2 percent of malathion. One gallon will treat 15 to 20 feet of wrapping. Re-treat the wrapping every 3 or 4 weeks.

To prepare a solution of proper strength, mix an emulsifiable concentrate of one of the insecticides with fuel oil or kerosene in the proportion indicated below.

EMULSIFIABLE LIQUID:	<i>Amount to mix with 1 gallon oil</i>
Toxaphene, 60 percent--	9 ounces
DDT or methoxychlor, 25 percent-----	1½ pints
Malathion, 57 percent--	5 ounces

PRECAUTIONS

Insecticides are poisonous to man and animals. Handle them with care and avoid unnecessary exposure to them. Read the directions on the label carefully before mixing. Wash off any concentrated materials spilled on your skin.

- Do not use a spray or dip if an oily or gummy layer forms after mixing.
- Do not use any insecticides in higher concentrations than those recommended.
- Do not contaminate feed, feed containers, or watering troughs with insecticides.
- Do not spray or dip recently weaned calves in bad weather. The exposure may kill them.
- Do not use oil sprays for controlling cattle lice.
- Do not use lindane, toxaphene, methoxychlor, DDT, Bayer 21/199, ronnel, or malathion on dairy cattle.
- Thoroughly mix insecticides before beginning treatment or resuming it after interruption. Otherwise some animals may receive too much for safety or too little for adequate louse control.

Prepared by

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and
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